

The following pages have been developed by the Virginia Department of Education in collaboration with NCS Pearson. NCS Pearson is under contract with Virginia to deliver the Web-Based Standards of Learning Assessment Program as part of the state's Standard of Learning Technology Initiative.

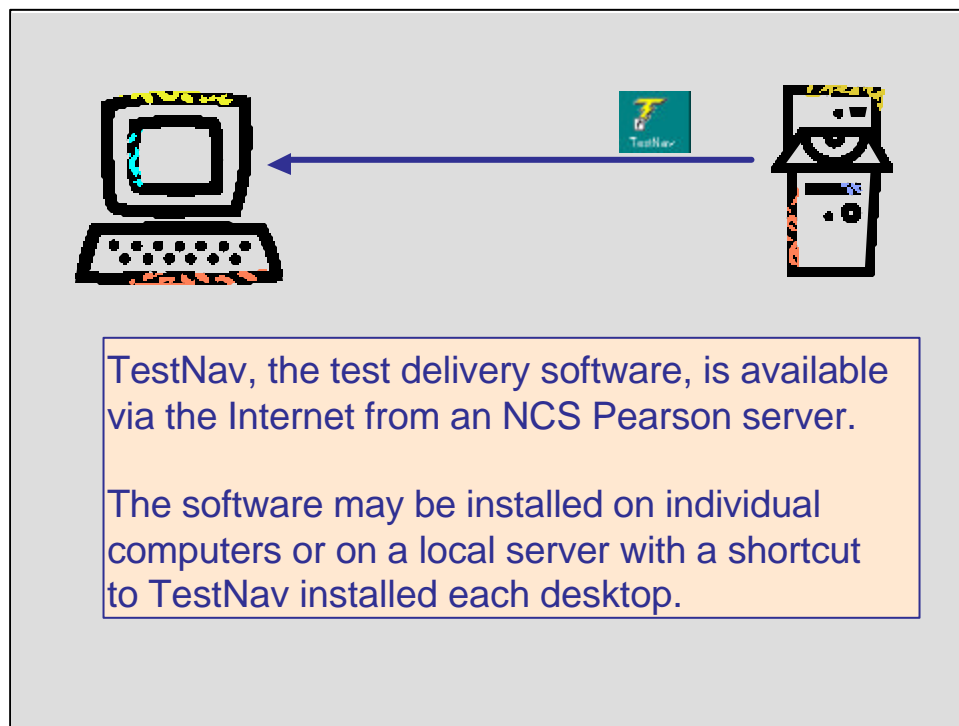
Test Delivery



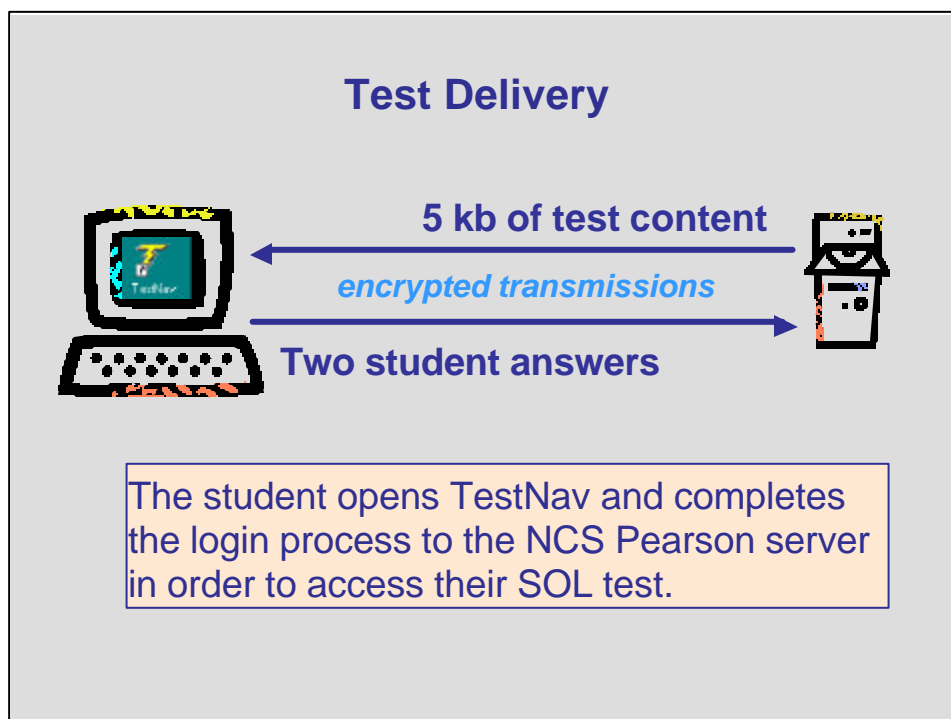
NCS Pearson's eMeasurement Services is a suite of tools that delivers tests and their results electronically. All functions offered within eMeasurement Services can be accessed from any location on the Internet. All that is required is a personal computer or a Power Macintosh and an industry-standard browser.

eMeasurement Services is a Web-Based test delivery system specifically designed to meet the needs of high-stakes, large-scale assessments. eMeasurement Services was designed to provide a secure testing environment that takes advantage of existing hardware and software already installed in schools. Access is controlled through user ID's and passwords. All transmissions are encrypted, and no items are left on the local workstation when testing concludes. Items or tests cannot be copied, e-mailed or printed.

TestNav is the test delivery application within eMeasurement Services. This delivery system supports sophisticated navigation, item review, and test restart functions.

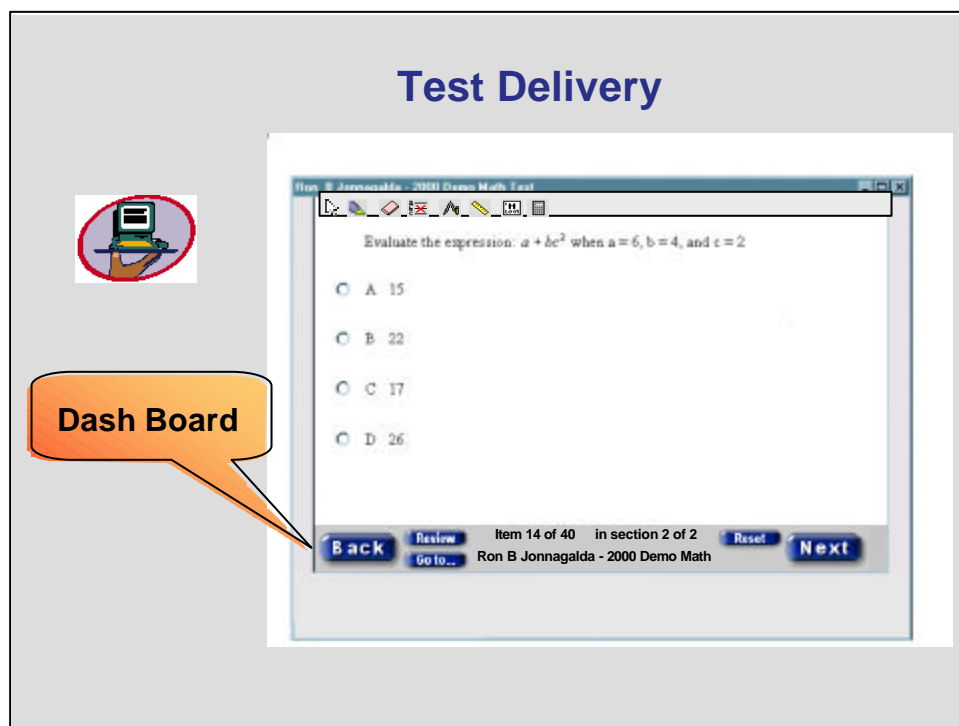


As part of the preparation for online testing, school divisions will download TestNav from an NCS Pearson server using an industry-standard browser. The application will be installed on each computer used by students for online testing, or alternatively, it may be installed as a shared application on a local server. If running TestNav as a shared application from a local server, a shortcut would be installed on each student workstation in order to access the application.



After opening TestNav and directing it to the correct Web site, the student enters their login ID and test code or password. The test that has been assigned to that specific login ID will begin to download to memory on the student workstation.

Approximately 5kb of test content is first downloaded to the student workstation. As the student begins to take the test, additional test questions are downloaded in the background, and the student's answers are sent back to the NCS Pearson server in bundles of two at a time. All data transmissions between student workstations and the NCS Pearson server are encrypted for additional security.

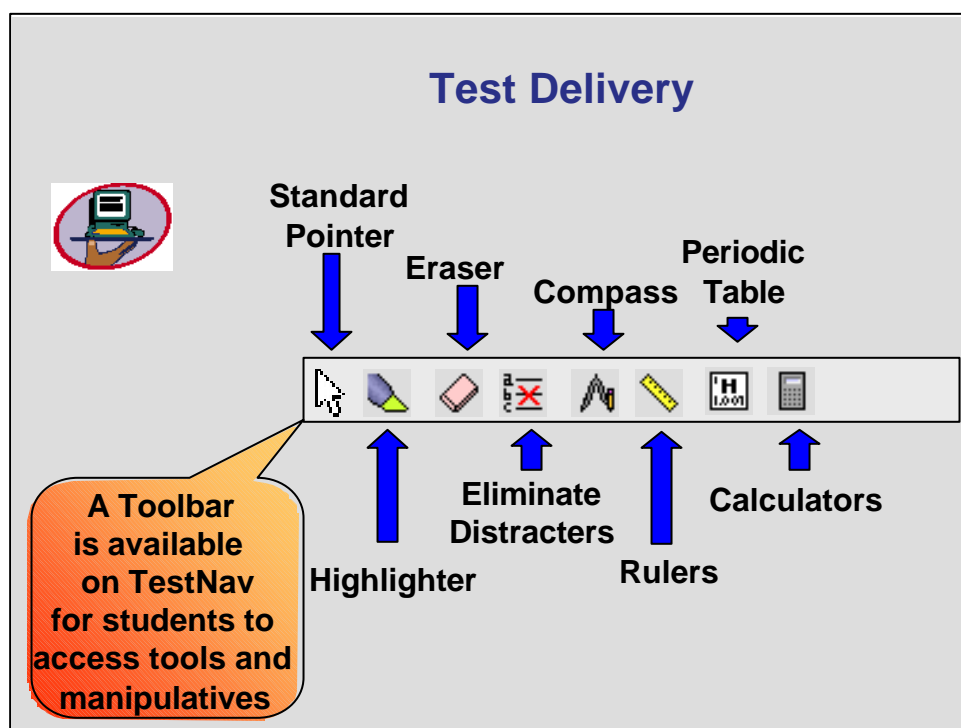


After students log in to TestNav, items in the test appear on the screen, one at a time. If an item includes graphics or is related to a reading passage, that information appears on the screen with the item. For each item, the student selects or types in the letter of their response.

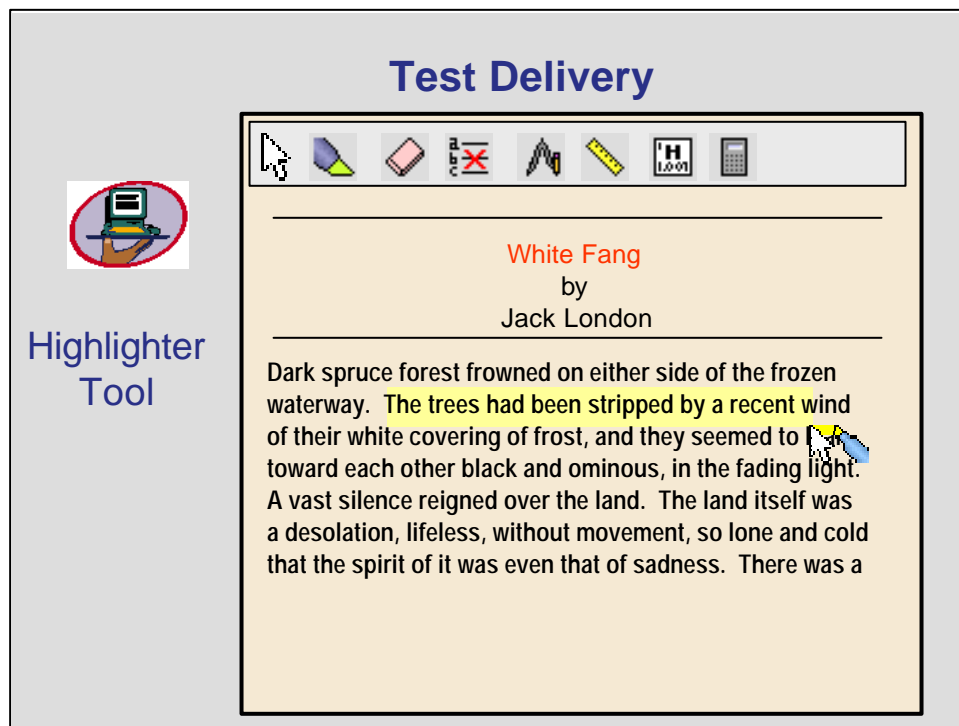
Students use the dash board to navigate throughout the test. A student may skip an item or mark the item for review. By marking the item for review, a visual reminder will appear by the question name in the review list at the end of the test. Clicking on the item in the list will return the student directly to that question.

A reset option allows students to clear the selected response and either leave the item blank or enter another response. Students can review and update their answers to items during the test and can navigate to the item review list at any time with the 'Go to' button on the dash board.

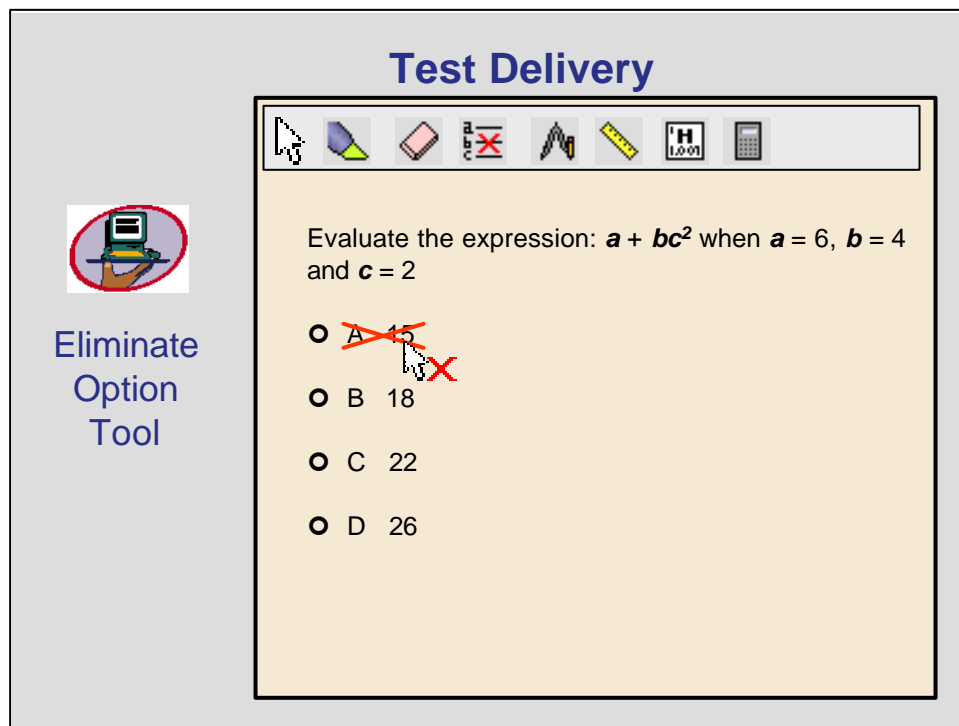
The student name is shown both at the top and bottom of the screen for easier viewing. This feature was added as a result of feedback gained from Virginia's Spring 2001 Demonstration Phase. This facilitates the test administrator's ability to verify at a glance that the student taking the test is truly the student assigned to take that test.



A toolbar is available on TestNav for students to access various tools and manipulatives. These tools include a standard pointer, highlighter, eraser, eliminate options tool, compass, straight edge, periodic table of elements, and 4-function and graphing calculators.




The highlighter tool is an optional test taking tool that can be used at any time during the test to highlight text or graphics. This feature was suggested during Virginia's Spring 2001 Demonstration Phase and was identified as a familiar test taking strategy.




The eliminate option tool can be used by students to visually mark out any responses that the student would like to eliminate as potential incorrect answers. By clicking with the tool on the answer they would like to visually eliminate, a red “X” will appear on that answer. The red “X’s” may be removed at anytime by re-clicking on the answer. This test taking strategy was also suggested during Virginia’s Spring 2001 Demonstration Phase.

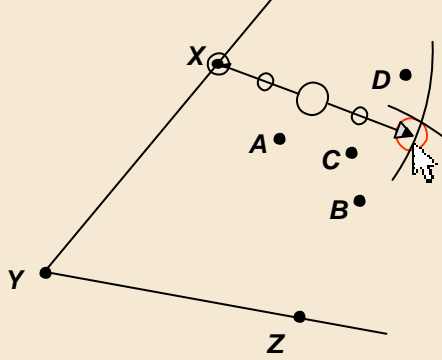
Test Delivery



Compass
Tool




Use your compass to bisect the angle $\angle XYZ$. Which point is on the bisection?











The compass tool is designed to function in the same manner as a “paper and pencil compass”. By using drag-and-drop manipulation, students are able to draw arcs for constructing angles and bisectors.

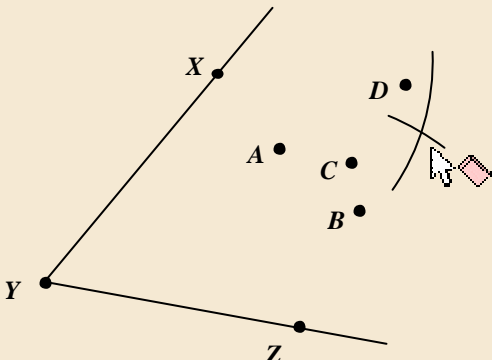
Test Delivery



Eraser
Tool



Use your compass to bisect the angle $\angle XYZ$. Which point is on the bisection?



The eraser tool will allow students to remove any drawing they put on a given item such as lines drawn with the compass or the straightedge tool or any markings made with the highlighter tool.

Test Delivery



Periodic Table of the Elements

Periodic Table of Elements

Atomic mass: 1.00794
Symbol: H
Atomic number: 1
Electron configuration: 1s¹
*The bracketed one represents the electron configuration of a noble gas.

Selected Oxidation State: +1
Name: Hydrogen

Periodic Table of the Elements

Groups: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18

Periods: 1, 2, 3, 4, 5, 6, 7

Transition Elements

Lanthanoid Series

Actinoid Series

Most abundant elements are listed in their common states.

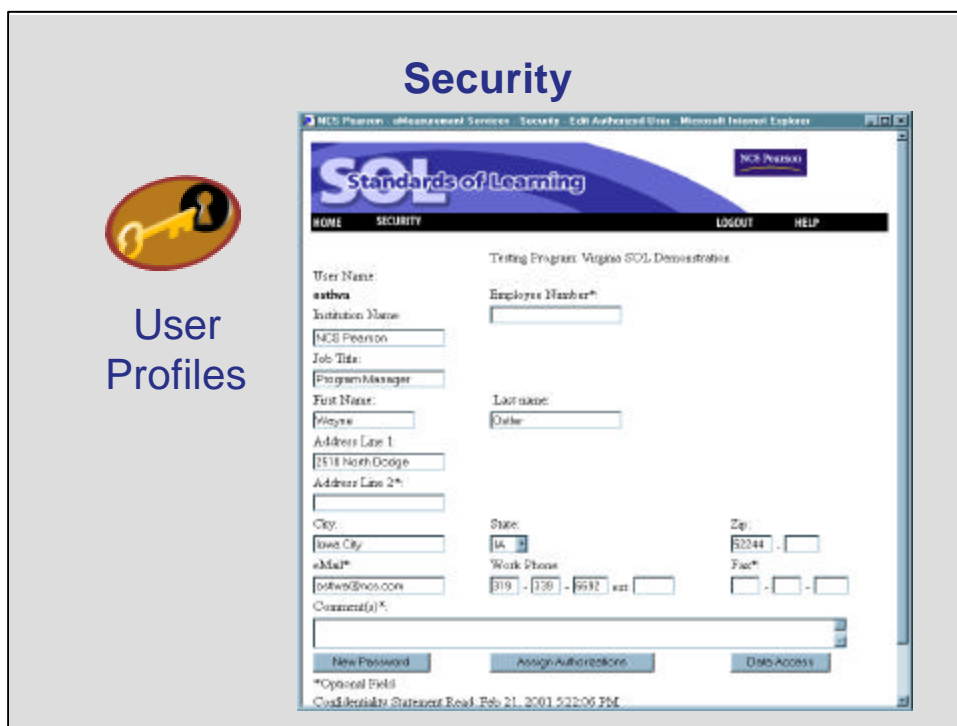
Metals

Nonmetals

Periodic Table of Elements

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The online periodic table of elements will allow students to select an element to 'zoom in' on the specific details of that element. This will open as a separate window on top of an item.



The screenshot shows a web browser window titled "NCS Pearson: eMeasurement Services - Security - Edit Authorized User - Microsoft Internet Explorer". The page has a blue header with "SOL Standards of Learning" and a "NCS Pearson" logo. Below the header is a navigation bar with "HOME", "SECURITY", "LOGOUT", and "HELP". The main content area is titled "Testing Program: Virginia SOL Demonstration". It contains a form for editing a user profile. The form fields are organized into two columns. The left column includes: "User Name" (with value "authva"), "Institution Name" (with value "NCS Pearson"), "Job Title" (with value "Program Manager"), "First Name" (with value "Mary"), "Address Line 1" (with value "1518 North Dodge"), "Address Line 2" (empty), "City" (with value "Iowa City"), "State" (with value "IA"), "Zip" (with value "52244"), "eMail" (with value "johndoe@ncs.com"), and "Work Phone" (with value "319 - 338 - 2592"). The right column includes: "Employee Number" (empty), "Last Name" (empty), "Date" (empty), and "Fac" (empty). There are buttons for "New Password", "Assign Authorizations", and "Data Access". A footer note states "Confidentiality Statement Read Feb 21, 2001 5:22:06 PM".

Security

User Profiles

Testing Program: Virginia SOL Demonstration

User Name: authva

Employee Number*

Institution Name: NCS Pearson

Job Title: Program Manager

First Name: Mary

Last Name:

Address Line 1: 1518 North Dodge

Address Line 2*

City: Iowa City

State: IA

Zip: 52244

eMail*: johndoe@ncs.com

Work Phone: 319 - 338 - 2592

Fac*

Comment(s)*

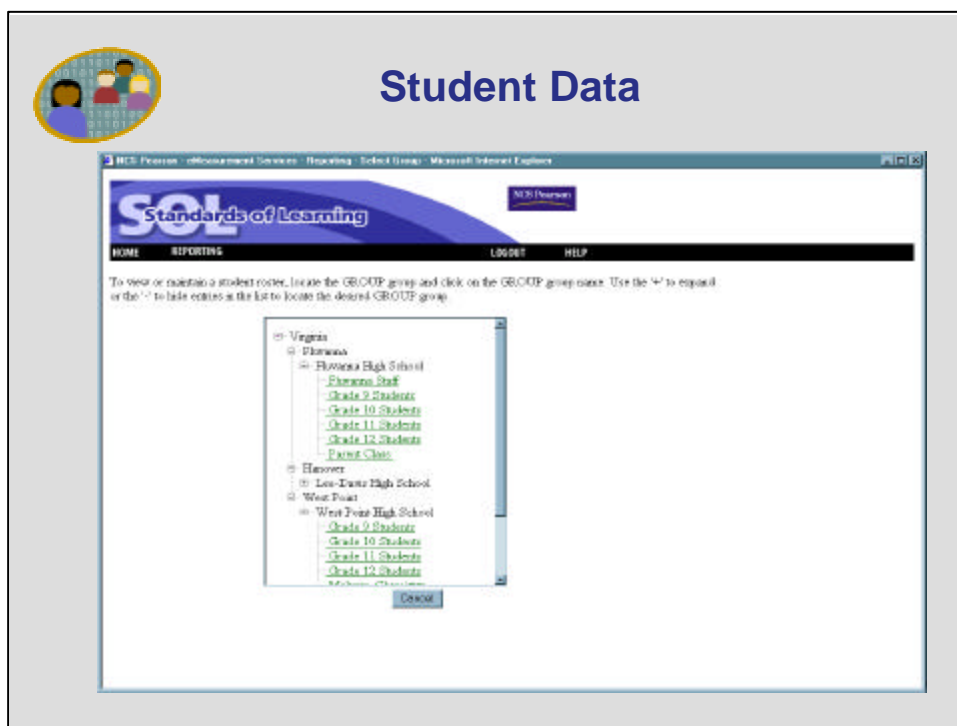
New Password Assign Authorizations Data Access

*Optional Field

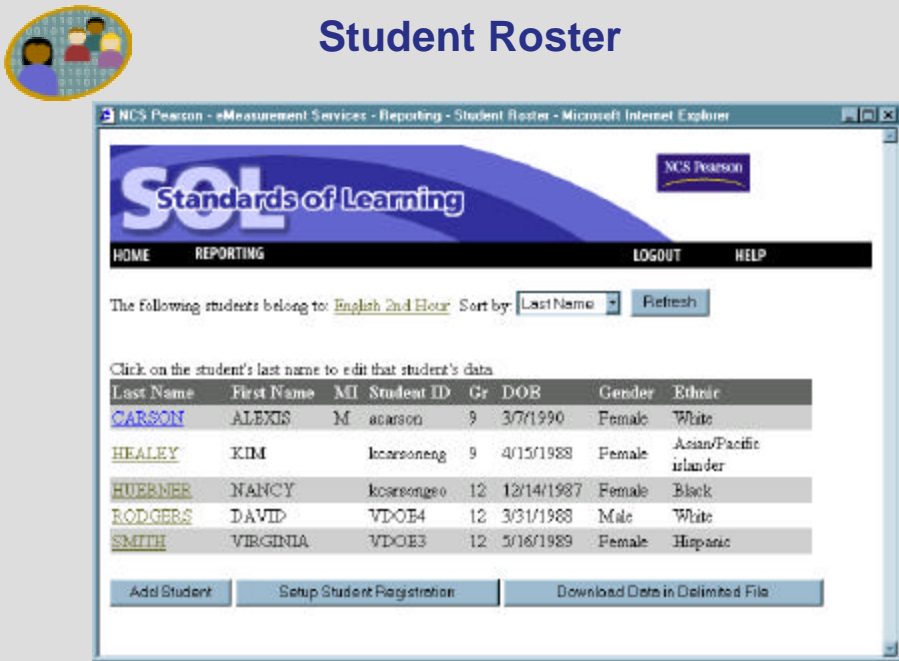
Confidentiality Statement Read Feb 21, 2001 5:22:06 PM

The eMeasurement Services system provides a robust set of administrative tools and functions that are all accessible from any location with an Internet connection, a PC or PowerMac, a standard web browser, and a valid administrative ID and password.

User profiles is one of the administrative functions that is designed to facilitate keeping a school division's testing materials and testing data secure. Through the security of User Profiles, specific levels of access may be assigned to certain individuals or positions within a school division. Profiles for test administrators, principals, teachers, and other authorized personnel can be added, updated, or removed as your school or division population changes.



All student data is organized into a hierarchical structure. Authorized school personnel are allowed to access only the student information for which they are responsible within the hierarchy. Students are “attached” to the lowest level in the hierarchy and can be grouped in many ways. In the example shown above, a list of students can be found under the lowest level, “Grade 9 Students”. The list of students found in “Grade 9 Students” under West Point would only be available to West Point staff members who have been assigned the proper access authority to view “Grade 9 Students” (as determined by the school division).



Student Roster

NCS Pearson - eMeasurement Services - Reporting - Student Roster - Microsoft Internet Explorer

SOL Standards of Learning

HOME REPORTING LOGOUT HELP

The following students belong to: English 2nd Hour Sort by: Last Name Refresh



Click on the student's last name to edit that student's data

Last Name	First Name	MI	Student ID	Gr	DOB	Gender	Ethnic
CARSON	ALEXIS	M	acarson	9	3/7/1990	Female	White
HEALEY	KIM	l	lcarsoneng	9	4/15/1988	Female	Asian/Pacific Islander
HUERMER	NANCY	k	kcarsonge	12	12/14/1987	Female	Black
RODGERS	DAVID	V	VD0E4	12	3/31/1988	Male	White
SMITH	VIRGINIA	V	VD0E3	12	5/16/1989	Female	Hispanic

Add Student Setup Student Registration Download Data in Delimited File

Test administrators can easily access their student rosters to verify the accuracy of their data. Student data can be entered online or can be mass loaded by sending a data file exported from a division's student information system to NCS Pearson. The only students displayed are those that the test administrator has been given access to view.

Individual Student Data



You have requested to update the following students record. Modify the data as needed and click OK to update or student roster. Click Cancel to not apply any changes and return to student roster.

The following student belongs to: [English 2nd Hox](#)

Last Name: First Name: MI*:

Student ID:

Login Name:

Grade Level:

Date of Birth*:

Disability Status*:

Migrant*:

Displaced Homemaker*:

Single Parent*:

Economic Status*:

SGA Adjustment*:

Ethnic Group*:

Special Code A*:

Excluded Student*:

Special Code B*:

Gender*:

Special Code C*:

LEP*:

Title I*:

Authorized test administrators can view individual student data (i. e. demographic information, etc) and make changes as required. The same student data that is required for the paper answer documents in the Virginia SOL Assessment Program will be required for the Web-Based Assessment Program.

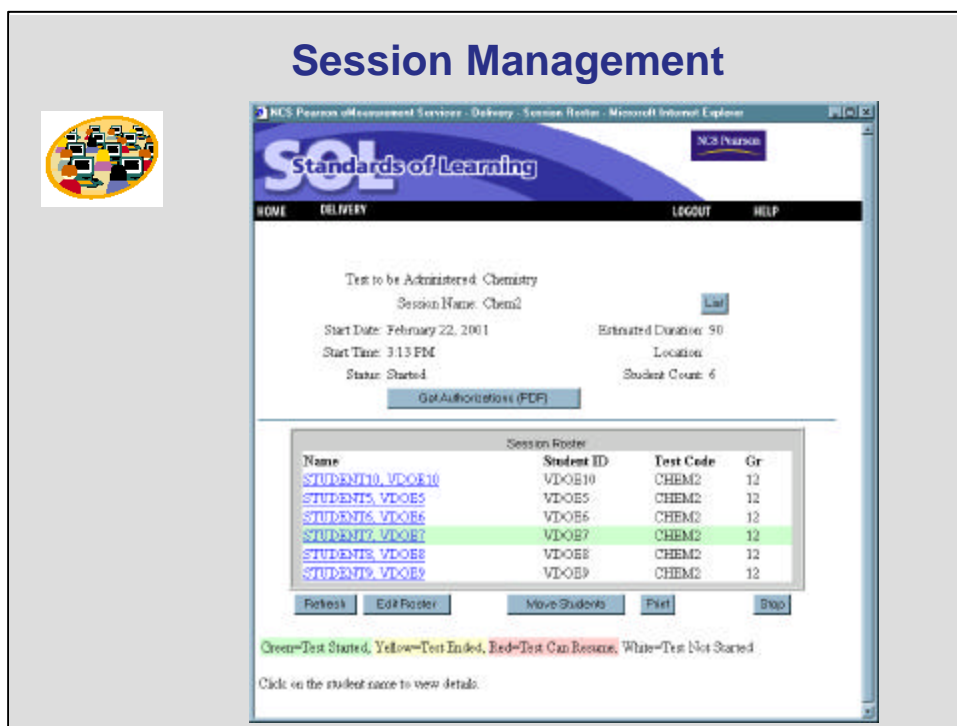
Student Search

Full student search capability

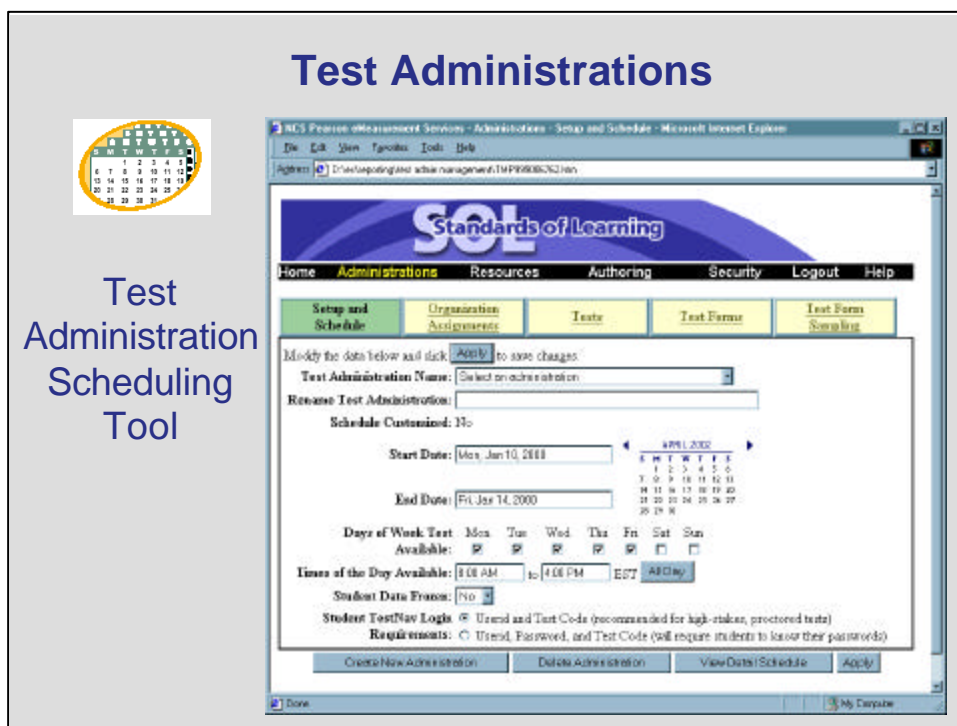
Immediately add a student to your roster.

Select Student ID	Name	Grade	Gender	Ethnic
<input type="checkbox"/> 100578345	ADAMS, JOHN	10	Male	Caucasian
This student belongs to: Algebra I				
<input type="checkbox"/> 100893887	ADAMS, BEN	11	Male	Caucasian
This student belongs to: Algebra I				
This student belongs to: Geometry				

Test administrators can also use the student search capability to locate an existing student record and add that student to a test roster. This feature was implemented based on feedback obtained from the three Virginia Demonstration Sites that were partnered with NCS Pearson in Spring 2001.




A “session” identifies a group of students who will be testing at the same time. Sessions provide another layer of security for managing student access to tests. Sessions are started and stopped by test administrators, and no student can login before the session has been started. Similarly, no student can login after the session has been stopped. The session roster screen allows the test administrator to view which students have started, not started, or completed their test.

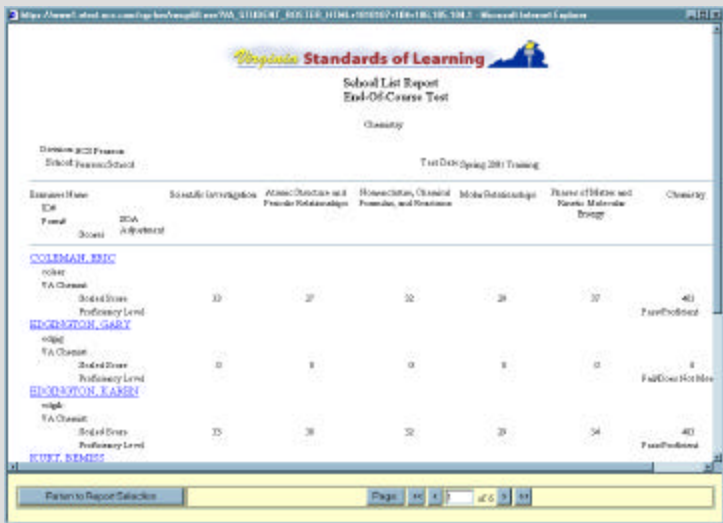


The Test Administrations Scheduling Tool allows authorized personnel to specify scheduling parameters for an entire testing window in order to provide an extra level of access security. When all divisions have submitted their testing windows to the Virginia Department of Education (VDOE), the earliest and latest testing dates will be entered so that no testing will be allowed to happen outside of those extreme dates. The VDOE will be responsible for administering this function of eMeasurement Services.

Reporting




School
List
Report



Student Name	Science Investigation	Algebra/Statistics and Probability	Geometry, Measurement, Probability, and Statistics	Mathematical Reasoning	Science of Science and History/Mathematics	Classroom
COLMAN, BEE						40
Teacher						
TA Class						
Student Score	10	20	30	20	30	40
Proficiency Level						Full Proficient
HODGSON, GARY						8
Teacher						
TA Class						
Student Score	0	0	0	0	0	8
Proficiency Level						Full Growth
HODGSON, KAREN						40
Teacher						
TA Class						
Student Score	35	30	30	20	30	40
Proficiency Level						Full Proficient
KUTY, RICHARD						

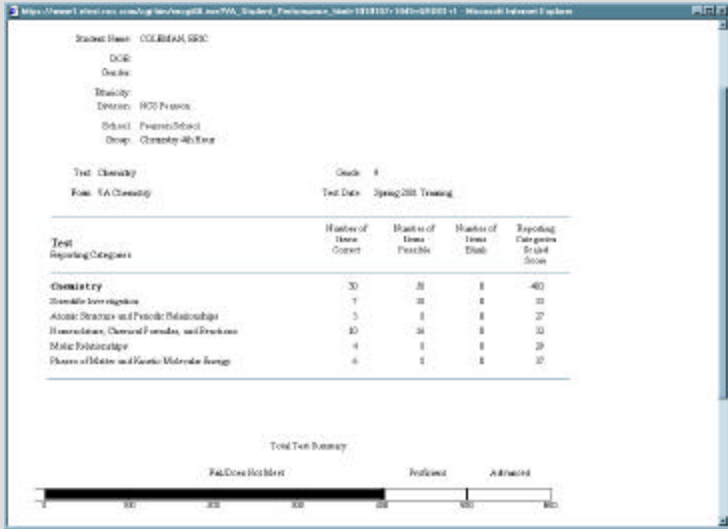
With the various reporting tools, authorized personnel can easily view the test scores of those students having taken the test online once those scores are made available. By accessing a student roster, authorized personnel can view how each of those students performed. By clicking on the student name, a detailed report of that individual student may be obtained.

All of the various reports generated are viewable through a standard web browser and may also be printed or downloaded as a data file. All administrative functions are accessible from any location with an Internet connection, a PC or PowerMac, a standard web browser, and a valid administrative ID and password.



Reporting (continued)

Individual Student Report



The screenshot shows a web browser window displaying the 'Reporting (continued)' page. It includes a header with the title 'Reporting (continued)' and a sub-header 'Individual Student Report'. The main content area displays student information: Student Name: COLLEEN, SR.; DOB: [redacted]; Grade: 8; Ethnicity: [redacted]; District: HOO Pines; School: Painesville; Group: Chemistry 40. The test results are shown for 'Test: Chemistry' and 'Form: 1A Chemistry'. The test date is 'Spring 2008 Training'. A table shows the test results for various categories, including 'Chemistry', 'Stoichiometry', 'Atomic Structure and Periodic Relationships', 'Thermodynamics, Chemical Formulas, and Equations', 'Molecular Structure', and 'Properties of Matter and Kinetic Molecular Theory'. The table has columns for 'Number of Items Correct', 'Number of Items Possible', 'Number of Items Done', and 'Reporting Category Score'. A progress bar at the bottom indicates the student's performance relative to the total test score.


Test Reporting Category	Number of Items Correct	Number of Items Possible	Number of Items Done	Reporting Category Score
Chemistry	30	30	1	40
Stoichiometry	7	30	1	33
Atomic Structure and Periodic Relationships	5	1	1	27
Thermodynamics, Chemical Formulas, and Equations	10	30	1	33
Molecular Structure	4	1	1	29
Properties of Matter and Kinetic Molecular Theory	6	1	1	37

Total Test Score: 40

Performance: 40% (40/100)

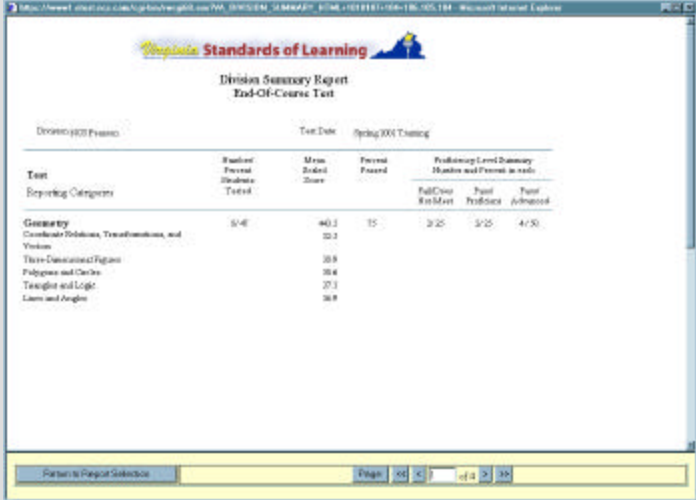
Progress: 40% (40/100)

The individual student report will display the specific results for any student having completed a Web-Based SOL test.



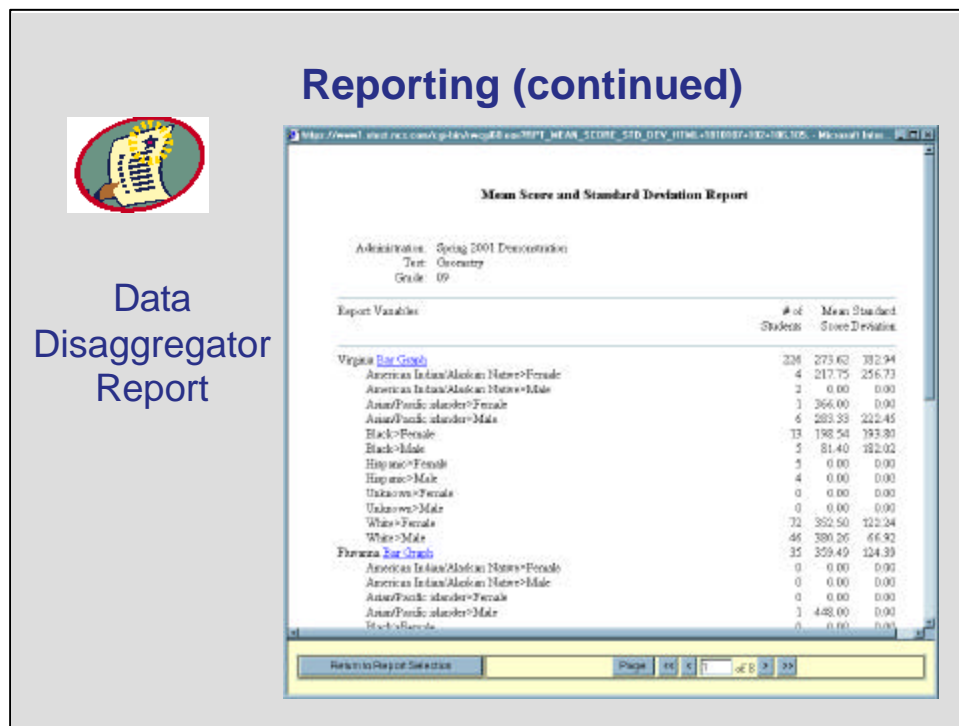
**Division
Summary
Report**

Reporting (continued)



Test	Reporting Category	Student Count	Mean Score	Percent Passed	Performance Level Summary		
					Number and Percent in each	Level 1	Level 2
Geometry		574	40.2	75	2/25	5/25	4/30
Coordinate Geometry, Transformations, and Vectors			32.2				
Three-Dimensional Figures			38.8				
Polygons and Circles			36.6				
Triangles and Logic			27.3				
Lines and Angles			36.8				

Authorized personnel can also access division and/or school summary reports to see mean scores for the Web-Based SOL tests administered within their division and/or school.



The data disaggregator report allows authorized personnel to view summary information by selected student demographic information. For instance, a report disaggregating the online student test population by ethnicity and gender can easily be generated.

For Further Information...

The Virginia Department of Education

<http://www.pen.k12.va.us/VDOE/Technology/soltech/soltech.html>

NCS Pearson, Inc.

<http://etest.ncs.com/customers/Virginia/index.htm>



The URL's shown above are two Internet locations that will provide the most current information regarding Virginia's Web-Based Assessment Program.

Project Contacts (☎/✉):

- Virginia Department of Education
- NCS Pearson



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